

What are Executive Function Skills and Its Importance to Children?

PARENTING

ARTICLE

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Executive Function is a set of mental skills that include working memory, flexible thinking, and self-control. In your child's early years, it is vital that they learn how to craft these skills as it will determine how they operate in the future. Children facing problems with their executive function may have trouble with focusing, handling their emotions and following directions.

Reasons why executive skills are important for children to learn

All parents marvel at their children's development from helpless newborns to fearless toddlers and precocious preschoolers, to inquisitive primary schoolers and beyond. It's not just the physical development that takes place in such a short time that's astonishing. The way a child's brain grows during this time is truly remarkable, too.

Your child is able to recount memories with startling precision. From throwing wild tantrums to hitting other kids at age two, your three-year-old gradually shows more self control and understands that some behaviours are just not acceptable. And from babbling, cooing and pointing at pictures in books just a few years ago, your seven-year-old surprises you with a keen ability to quickly adapt to new situations or change his/her focus from one thing to another.

There is an important set of skills that are responsible for these (and more) phenomenal cognitive developments in your child that spark the thirst for lifelong learning. . They are known as **executive function skills**.

What are executive function skills?

Think of executive function as "the CEO of the brain," that creates, implements and manages all important decisions. The Center on the Developing Child, Harvard University, compares executive function skills to a busy airport's air control system. Just as it safely coordinates and manages the arrivals and departures of multiple aircraft, the brain requires executive function skills to manage many processes, "filter distractions, prioritize tasks, set and achieve goals, and control impulses."

There are three executive function skills:

- Working memory
- Cognitive flexibility
- Self-control

This skill-set is crucial for children to successfully manage our daily activities, and is essential for learning and development. Moreover, all these skills are highly interrelated and must coordinate with each other smoothly for proper overall function.

Therefore, if executive function skills are not well-developed in a child, it may result in learning or social difficulties.

This is why it's important for parents to support the development of these skills in their kids, starting young.

The role of each executive function skill and how parents can hone them

Let's deep-dive into each executive function skill to understand its role in your child's

learning and development, and discuss practical steps that you can take to improve these skills in your little ones.

1. Working Memory



Working memory is related to how your child stores and uses the information in his/her mind. It is an essential skill children need to hold information in his/her head and manipulate it mentally. It is also required for tasks like multi-step directions, which they will be exposed to as they grow up. When kids have poorly developed working memory, they may stumble when carrying out regular daily tasks. Help develop this skill in your little one through the following fun yet effective ways:

Toddlers:

- Play simple imitation games like Follow the Leader, or Punchinella, where your child needs to use his/her working memory to remember

certain actions or instructions in order to play the game properly.

- Song games with multiple movements are fun and effective ways to teach working memory. For example, The Hokey Pokey, I'm a Little Teapot and Head, Shoulders, Knees, and Toes. Such songs need your little ones to listen to the words, store the instructions in their working memory, and then use these to guide their movements.
- Set simple two-step rules to remember for familiar games. For example, in a basic "running race" challenge, tell your toddler that he/she needs to, 1) Listen for your "Go!", 2) Touch the "finish line."

Preschoolers:

- Instead of giving your child too many instructions at once—which often results to him/her forgetting most of them—what parents can do is stagger your instructions or break them down. For example, "Please put your toys and books away first, and then I'll tell you what to do next."
- Tell stories together about shared events. For this, your child is required to reflect on the experience stored in his/her working memory. Then, your little one must think about the order of these events, before telling you about them.
- Repeating favourite puzzles is a good way for preschoolers to hone working memory because they've already done the puzzle before. In order to complete it again, they need to reflect on how they did it the first time, which then triggers recollection of information stored in their brain.

Primary schoolers:

- Teach your child to start writing instructions and other important matters down. This will improve his/her memory.
- Encourage your primary schooler to keep a diary. This is a healthy way to express personal emotions, while strengthening writing skills and of course, sharpening working memory.
- Singing in rounds compels children to use their working memory. Do it together as a family as a fun bonding activity. A great song to start with is Row, Row, Row Your Boat.

2. Cognitive Flexibility



In a nutshell, cognitive flexibility is the brain's ability to think outside the box, or in new ways. It's a way for kids to think about issues, experiences and challenges differently, and understand the world in his or her own way. In addition, cognitive flexibility is needed for effective problem solving, as it sheds light on new perspectives and helps kids come up with multiple solutions to an issue.

According to early childhood educator Amanda Morin, cognitive flexibility actually involves the development and use of two skills: flexible thinking and set shifting. The former is when children are able to think about something in a new way, and the latter involves the ability to let go of old learning and embrace new ways of approaching a problem or doing something.

In very young children, cognitive flexibility is naturally under-developed. However, you can help your little ones sharpen this crucial cognitive skill through engaging in the following fun activities at home:

Toddlers:

- Bring your little one outdoors. Nature presents different stimuli such as sounds, textures, temperatures and smells that provide your toddler with many opportunities to shift focus, while understanding that everything is interconnected. Remember to help your little one along this journey of learning: “Look at this tree! Touch the bark -- what do you feel? Now touch the leaves! How do they feel?”
- Change routines slightly. Yes, routines are great. But when your little one grows up, society is not going to present him/her with predictable experiences. Enable your little one’s gear-shifting ability to embrace change by including very small changes in his/her routines. For example, if you always dress your child in his/her t-shirt before putting on his/her socks, switch the order and observe if your little one notices (and reacts) to the change.
- Give surprises! A pleasant and exciting way for little ones to hone cognitive flexibility is through the introduction of occasional surprises in their day. For example, if you’re going on a walk together, pack your child’s favourite toy and surprise him/her with it when you reach your destination. Your child will need to shift attention and adjust to this exciting new “twist”.

Preschoolers

- Engage in pretend play. Imaginary play encourages little ones to assign multiple roles or uses to one object. For example, a stick can function as a wand, a baton or an oar. The ability to look at the same thing in different lights triggers imagination and hones cognitive flexibility.
- Change rules of favourite games. It doesn't have to be a huge change. This could be simply changing gear and swinging your child in the opposite direction to what he/she is used to on the swing.
- Encourage tactile stimulation, and arts and crafts. Using different bits and pieces to create one "masterpiece" teaches your little one that there are many uses for an item, or that he/she has the ability to transform one or two items into something else. For example, soil and water when mixed because mud. Or a simple piece of cardboard transforms into the roof of a house.

Primary Schoolers

- Encourage reading. Kids need to use flexible thinking to understand the rules of language. It's cognitive flexibility that enables your child to correctly pronounce the words "dough" and "tough", understanding how the same combination of letters can make different sounds. They also learn that the same word can have different meanings depending on the context: "This bird is a crane," "The crane lifts the blocks."
- Promote writing. Kids have to think flexibly in order to create an interesting, meaningful and comprehensive piece of writing. Don't make it a chore, though. Encourage your child to write in a journal, or put down his/her experiences in writing after a fun day out.
- Teach your child a second language. In order to master two languages, your child's brain has to switch between the rules of each in order to learn them both, thus enhancing cognitive flexibility.

3. Self-control



Children are often impulse-driven and lack self control. This is why a toddler will grab a toy out of the hands of another child, or even hit the other child. It's perhaps why your preschooler simply cannot resist that bar of chocolate, even though he/she has already had dessert. But as children grow older, you'll notice an improvement in their impulse control. This is because it develops through time.

Self-control is the ability to control impulsive behavior, and is a key executive function skill for children when it comes to learning. It's important since it allows children to focus on their tasks without getting sidetracked, and enables them to get along with other people harmoniously. Here's the catch—self-control doesn't properly develop in your children until they are around four years old, suggest studies.

However, you can still set a strong foundation for good self-control skills when your child is young, and continue to hone these skills as your child grows up. Here are age-based tips you can try:

Toddlers:

- Set limits and consequences. Toddlers are notorious for having very little self control. If they say, "I want!" then usually, they won't stop nagging, whining or tantruming until they get it. However, if you introduce mild rules and consequences for inappropriate behaviour, your child learns self control: "You'll get ice-cream after you eat your lunch."
- Reward even the smallest display of self-control. For example, if you notice your toddler waiting for his/her turn, or saying "Please" instead of just snatching a toy from another child, reinforce this good behaviour with lots of praise.
- Model self-control to your child through your own behaviour. You are your toddler's most influential teacher and if you behave in the way you want your child to, you can most certainly expect him/her to emulate you. You can also do this through using language such as, "May I borrow that, please?" and "It's okay, I can wait."

Preschoolers:

- Identify your child's feelings. Whenever your child loses self-control, ask him/her why it happened, and how he/she felt when it happened. This helps you get an insight into your child's brain and you can teach your child how to identify triggers that cause him/her to lose control.
- Set expectations. Be clear with your child, especially when it comes to the behavior that you expect. Self-control is also the ability to reel in inappropriate behavior, and setting expectations really helps.
- Play games like Freeze, or What's The Time, Mr Wolf? Such games need self control to bring the child closer to winning.

Primary schoolers

- Ask problem-solving questions, such as “How can we prevent his problem?”, “Why do you think you behaved in that way?”, or “How can you help him/her feel better?” Such questions promote the kind of thinking that can result in better self control.
- Help your child identify emotions and feelings: “You seemed angry when I said you couldn’t have extra ice cream.” By teaching your little one how to figure out his/her emotions and feelings, you are helping your child check him/herself before an outburst.
- Teach your child how to self-talk in order to handle stressful situations. For example, he/she can silently tell him/herself, “I can handle this,” or “I don’t like this but I’ll stick through with it. This gives your child the inner strength needed to deal with tough situations without losing control.